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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/602,791	06/24/2003	William Leon Rugg	STL10987	1683

7590 06/30/2005

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EXAMINER
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LETSCHER, GEORGE J

ART UNIT	PAPER NUMBER
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2653

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/602,791

Applicant(s)

RUGG ET AL.

Examiner

George J. Letscher

Art Unit

2653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/24/03</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 8 and 10-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claim 8 recites the limitation "the interface connector" in line 2. There is insufficient antecedent basis for this limitation in the claim.
4. Claims 10 and 11 recite the limitation "the cover" in line 2. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-2 and 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Sega et al (EP 760510).

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The aforementioned claims recite the following features, inter alia, disclosed in Sega '510: a data storage device (1) comprising a base plate (part of 17), a spindle motor (3), an actuator assembly (8), a flex printed circuit board (21) on the top of the base plate having actuator and motor electronic control components (20) on top surface of the base, a power combo chip (part of 20) on the flex circuit board assembly, an interface connector (16) attached to the board and to the base plate. See Figures 1 and 2 of Sega.

*Claim Rejections - 35 USC § 103*

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sega '510 in view of Koo et al (US 6,243,262).

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The description of Sega '510 is in paragraph 3, supra.

Regarding claim 3, Sega does not show a top cover forming a closed space with the base with the actuator and motor control components being outside the enclosed space.

Koo et al '262 disclose a top cover (120) forming a closed space with the base (110) with the actuator and motor control components (300a) being outside the enclosed space due to open portion (120a) of cover. See Figures 3-4 of Koo et al.

10. Claims 5-7, 9-10, 12-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sega in view of Kaneko (US 6,678,112).

The description of Kaneko et al is in paragraph 3, supra. Additionally, Sega shows the one or more components being multiple chips (multiple element 20). Sega also shows actuator and spindle motor pigtail leads (14 and 15) beneath the cover.

Regarding claim 5, Sega do not teach a stiffener attached to a bottom surface of the flex printed circuit where the stiffener is metal (claim 6) and forms a ground plane (22) for circuitry on the printed circuit. Regarding claim 7, Sega does not disclose a power plane on the stiffener.

Kaneko discloses a metal stiffener (12) attached to a bottom surface of the flex circuit with a power plane (part of 8 and 10) on the stiffener. See Figures 5 and 7-8 of Kaneko et al.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have furnished the disk drive of Sega with a metal stiffener attached to a bottom surface of the flex circuit with a power plane on the stiffener as taught by Kaneko et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to have furnished the disk drive of Sega with a metal stiffener attached to a bottom surface of the flex

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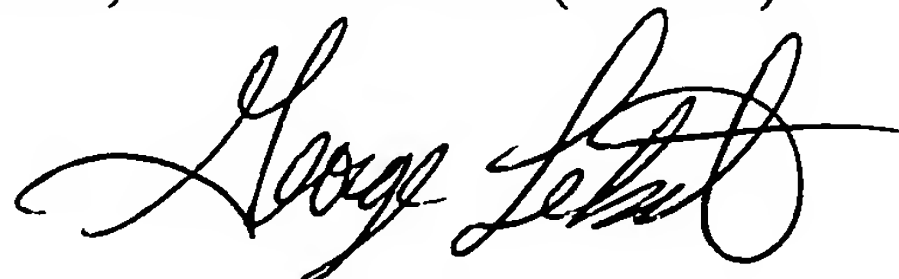
circuit with a power plane on the stiffener as taught by Kaneko et al since one of ordinary skill in the art knew it was used to form the shape of the flexible printed circuit board; see column 4, lines 26-32 of Kaneko.

### ***Conclusion***

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George J. Letscher whose telephone number is 571-272-7591. The examiner can normally be reached on a Conventional work schedule.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Korzuch can be reached on 571-272-7589. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-437-3785 (toll-free).



***George J. Letscher  
Primary Examiner  
Art Unit 2653***